

REMARKS

In response to the Office Action mailed June 27, 2005, applicants are filing the current amendment, which amends claim 1, claim 22, and claim 42.

In the Office Action, the Examiner rejected claims 1, 2, 22, and 28 under 35 USC §103 (a) as being unpatentable over Vail (United States Patent No. 6,031,381) in view of Ando (United States Patent No. 4,742, 298). To the extent of the rejection applies to amended claims, Applicants respectfully traverse the rejection.

Applicants' claim 1 recites, "a first contact for maintaining electrical contact with the pipe as the vehicle moves through the pipe, and a second contact ...for maintaining electrical contact with the pipe as the vehicle moves through the pipe." In contrast, Vail teaches a stationary device which will not encounter the voltage error problems that Applicants' invention is directed to. As the Examiner noted, Vail does not clearly teach how the circuitry travels through the borehole casing. Applicants respectfully submit that Vail also does not clearly teach how Vail's electrical contacts would be able to maintain electrical contact as the circuitry was traveling through the borehole casing.

Applicants respectfully submit that Ando does not remedy the deficiencies of Vail discussed above. Ando teaches measuring a voltage change created by a change in magnetic field, not measuring a voltage difference between two locations and a pipe.

Claim 22 also teaches a first contact to maintain electrical contact with the pipe as the vehicle moves through the pipe, and a second contact to maintain electrical contact with the pipe as the vehicle moves through the pipe.

Applicants respectfully submit that neither Vail nor Ando, alone or in combination, teach or suggest the desirability of a first contact for maintaining electrical contact and a second contact for maintaining electrical contact with a pipe as the vehicle moves through the pipe.

Applicants respectfully request that the Examiner withdraw the rejection to claims 1, 2, 22, and 28 for at least the same reasons as discussed above.

In the Office Action, the Examiner rejected claims 3, 4, 7, 10, 18, 29, 30, 33, 34, and 40 under 35 USC§103(a) as being unpatentable over Vail, in view of Ando, and further in view of Couchman (United States Patent No. 6,538,431). To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

In the Office Action, the Examiner stated that, "Modification to Vail's and Ando's pipeline pig to include brushes/bristles would have been obvious to one skilled in the art at the time the invention was made..."

Applicants respectfully submit that Vail teaches a stationary device, and not a pig. In addition, Ando teaches a device that measures the change in a magnetic field, not a devices that measures a change in voltage. Similarly, Couchman teaches a device that measures magnetic flux leakage, not a change in voltage, "The return path elements 36 and sensors 48 operate in conventional manner, based on magnetic flux leakage, to monitor the condition of the associated pipeline." (Couchman, column 3, lines 36-38).

Applicants respectfully submit that neither Vail nor Ando, nor Couchman, alone or in combination, teach or suggest the desirability of a first contact for maintaining electrical contact with the pipe and a second contact for maintaining electrical contact with the pipe and a voltage reading device connected to the first contact and the second contact for measuring the voltage. As recited in Applicants' independent claims 1 and 22. In addition, Applicant's respectfully submit that there is no motivation or suggestion to combine Ando with Vail and with Couchman in the manner the Examiner suggested.

Applicant's respectfully submit that the Examiner withdraw the rejection to claims 3, 4, 7, 10, 18, 29, 30, 33, 34, and 40 for at least the reasons stated above.

In the Office Action, the Examiner rejected claims 12 and 34 under 35 USC§103(a) as being unpatentable over Vail, in view of Ando, and further in view of

Potapenko (United States Patent No. 2,190,320). To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

Applicants respectfully submit that Potapenko teaches a voltmeter at the surface, which is connected to a number of electrodes 22, 23, 27, and 28, also at the surface. Potapenko does not teach or suggest the desirability of placing electrodes in a current carrying pipe, nor moving the electrodes through the pipe.

Applicants respectfully submit that there is no teaching or suggestion to combine Ando, with Vail, and with Potapenko as taught by the Examiner. Further, neither Ando nor Vail, nor Potapenko, alone or in combination, teach or suggest the desirability of a first contact for maintaining electrical contact with the pipe as the vehicle moves through the pipe, and a second contact for maintaining electrical contact to the pipe as the vehicle moves through the pipe.

Applicants respectfully request that the Examiner withdraw the rejections to claims 12 and 34.

In the Office Action, the Examiner rejected claims 13-15, and 35-37 under 35 USC§103(a) as being unpatentable over Vail, in view of Ando, and further in view of Applicants' admitted art. To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

The Examiner stated that those skilled in the art will recognize that any number of contact devices and/or low noise electro-mechanical devices may be used with the current invention. Applicants respectfully submit that neither Vail, nor Ando, nor Applicants' admitted art teach or suggest the desirability of a first contact, a second contact, and a voltage reading device, as discussed above.

In the Office Action, the Examiner rejected claims 20-21 and 23-27 under 35 USC§103(a) as being unpatentable over Vail, in view of Ando, and further in view of Ignagni (United States Patent No. 6,553,322). To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

Applicants respectfully submit that Ignagni does not remedy the defects of Vail and Ando discussed above, as neither Vail, nor Ando, nor Ignagni, alone or in combination, teach or suggest the desirability of a first contact, a second contact, and a voltage reading device. In addition, Applicants respectfully submit that there is no teaching or suggestion to combine Vail, with Ando, and with Ignagni as suggested by the Examiner.

In the Office Action, the Examiner rejected claims 16 and 38 under 35 USC§103(a) as being unpatentable over Vail, in view of Ando, and further in view of Cloutier (United States Patent No. 4,427,943). To the extent the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

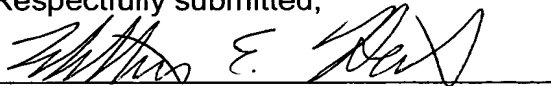
Applicants respectfully submit that Cloutier does not remedy the defects of Vail and Ando discussed above, as neither Vail, nor Ando, nor Cloutier teach or suggest the desirability of a first contact, a second contact, and a voltage reading device. In addition, Applicants respectfully submit that there is no teaching or suggestion to combine Vail, with Ando, and with Cloutier as suggested by the Examiner.

In the Office Action, the Examiner stated that claims 5, 6, 9, 11, 17, 19, 31, 32, 33, 39, 41, and 42 contained allowed subject matter. Applicants would like to thank the Examiner for stating that those claims contain allowable subject matter.

Conclusion

If the Examiner believes it would be useful to discuss the above contents with Applicant's representative, the Examiner is invited to phone the undersigned.

Respectfully submitted,



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